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Alpha_s from tau decays: perturbative expansion of spectral function moments

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We will discuss recent developments in the QCD description of hadronic tau decays with emphasis in the perturbative contribution. Various moments of the hadronic spectral functions have been employed in the determination of the strong coupling alpha_s from tau decays. We will analyse the behaviour of their perturbative series under different assumptions for the large-order corrections and for the renormalization group improvement of the series. Some moments commonly employed in alpha_s analyses from tau decays should be avoided because of their perturbative instability. Finally, we will argue that some of the recent analyses do not employ an optimal strategy for an alpha_s determination.

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